

# RSW 1300 3-Phase Railway Sinewave Inverter

RoHS Compliant  
Directive 2002/95/EC



Pure sinewave



3-Phase output



High frequency technology



Light weight, compact size



Full electronic protection



Extended temperature range



Designed for rolling applications according to EN50155



Output fail alarm (Form B)



Remote control

## Applications

- Railway Applications
- Industrial Controls
- Telecom Power Plants
- Marine & other rugged environments
- Electric Utilities and Substations
- Base Station Power

# Sinewave Inverter

Series RSW1300-3P

## Description

The RSW1300-3P consists of three phase sine-wave DC-AC inverters with galvanic isolation between input and output.

The unit allows:

- Remote ON/OFF  
ON: Apply nominal voltage on pins 1 and 2 of J2  
OFF: Remove the voltage from pins 1 and 2 of J2
- Start-up motors by means of a soft start. In the start-up, the output voltage and frequency rise linearly from 0V to set voltage and from 5Hz to set frequency. The start-up ramp slope may be changed via RS-232 port
- Set the rotation speed of a motor according to the appropriate Voltage/Frequency ratio.
- Monitoring the status of the input and output.
- Set and monitor parameters via RS-232.

The RSW1300-3P has a maximum output current protection. This protects the semiconductors even when an output short-circuit occurs. It also features a disable function for input under-voltage.

## Features

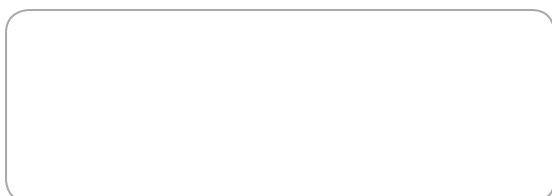
- Sine wave output voltage
- Suitable for motors control
- Adjustable output voltage
- Selectable output frequency: 50/60Hz
- High input-output isolation 3000Vrms
- Remote control via RS232
- Alarm by isolated relay contacts
- Remote ON/OFF opto-coupled
- According to the standard EN50155
- Fire and smoke EN45545-2 approved
- Protection against overloads and short-circuits
- Protection against input undervoltage

## Specifications (Specifications Subject to Change Without Notice)

Model	Input nominal	Max. input current		Output voltage		Power	Output current	Output peak current		Efficiency	Size
		No load	Full load	Nom	range			Arms 10s	10ms (lopk)		
<b>RSW1300 3-P 24-250</b>	24Vdc	1.05A	66.0A	250Vac	150...250V	1300VA	3.0A	4.5A	6.4A	89 %	2
<b>RSW1300 3-P 72-250</b>	72Vdc	0.33A	24.4A	250Vac	150...250V	1300VA	3.0A	4.5A	6.4A	90 %	1
<b>RSW1300 3-P 110-250</b>	110Vdc	0.20A	16.0A	250Vac	150...250V	1300VA	3.0A	4.5A	6.4A	90 %	1
<b>RSW1300 3-P 24-400</b>	24Vdc	1.28A	66.0A	400Vac	200...400V	1300VA	1.88A	2.8A	4.0A	89 %	2
<b>RSW1300 3-P 72-400</b>	72Vdc	0.39A	24.4A	400Vac	200...400V	1300VA	1.88A	2.8A	4.0A	90 %	1
<b>RSW1300 3-P 110-400</b>	110Vdc	0.25A	16.0A	400Vac	200...400V	1300VA	1.88A	2.8A	4.0A	91 %	1

<b>INPUT</b>	
Input voltage range	-30, +25% Vin nom
Maximum input ripple	15% pp Vin nom (Vrms, 100Hz)
<b>OUTPUT</b>	
Nominal output voltage	See table
Output voltage range	See table (adjust via RS-232)
Output frequency	50Hz, 5...60Hz via RS-232
Load regulation	< 4%
Line regulation	< 2% Vin -25% ... +25%, < 10% Vin -30% ... +30%
Output wave distortion THD	< 2% (average of 16 samples)
Output HF ripple	< 2.5%
<b>ENVIRONMENTAL</b>	
Storage temperature	-25 ... 80°C
Operating temperature:	
Full load	-25 ... 55°C (EN50155 T1)
50% load	-25 ... 70°C (EN50155 T3)
Relative humidity without condensation	5 ... 95%
Cooling	Controlled internal fan
MTBF (MIL-HDBK-217-E; G <sub>b</sub> , 25°C)	100.000 h
<b>EMC</b>	
Immunity according	EN61000-6-2 (EN50121-3-2)
Emissions according	EN61000-6-4 (EN50121-3-2)
<b>SAFETY</b>	
Dielectric strength: Input / output	3000 Vrms / 50Hz / 1min
Dielectric strength: Output / ground	1500 Vrms / 50Hz / 1min
Dielectric strength: Input / ground	500 Vrms / 50Hz / 1min
Safety according to	EN60950-1
Fire and Smoke	EN455545-2
<b>MECHANICAL</b>	
Weight	4 kg
Dimensions	Size 1: 315x 180x 66.5 mm      Size 2: 315x 200x 66.5 mm
Connections	Input wire 6mm <sup>2</sup> to 10mm <sup>2</sup> , Output wire 1mm <sup>2</sup> to 2.5mm <sup>2</sup>
<b>PROTECTIONS</b>	
Protection against overloads	Current limited
Against overtemperature	Shutdown with auto-recovery
<b>CONTROL</b>	
Output alarm	Open when alarm. Maximum rating: 0.16A at 160Vdc
Remote ON/OFF input	On when applying Vin range, Impedance>8kO

Available from:



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